United States Department of Agriculture
Natural Resources Conservation Service

Notice of Release of Brooksville 68 Germplasm Perennial Peanut
Tested Class of Natural Germplasm

The Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture announces the release of a tested ecotype of perennial peanut (Benth.) for Peninsular Florida.

As a tested release this plant will be referred to as Brooksville 68 Germplasm perennial peanut. Once released, developing a more marketable name that can be trademarked will be explored with potential growers. As will be explained in the next section, the original identity of this accession is uncertain. Brooksville 68 Germplasm is released as a tested class of vegetative plant material.

This alternative release procedure is justified because the demand for low maintenance ground covers is high and the existing commercial sources of perennial peanut are limited.

Collection Site Information: Brooksville 68 Germplasm was selected in 1991, out of an old collection of 13 perennial peanut accessions located at the Brooksville, Florida Plant Materials Center (PMC). The history of this site is explained below in the "Method of Selection" section of this document.

Description: Brooksville 68 Germplasm is a rhizomatous long-lived perennial legume in the or peanut genus, and is of the species, which naturally occurs in South America. Leaves are elliptic to lanceolate in shape, typically small and dark green in color. Canopy height of mature stands can range from less than 1 inch to over 5 inches, depending on environmental conditions. It produces substantially less biomass than forage types of perennial peanut. A comparatively large numbers of flowers are produced. Flower color is yellow-orange. Mature stands form a dense mat of fleshy rhizomes, and seed is rarely formed under Florida conditions. Plants are propagated by incorporating rhizome material into the soil. Depending on soil and moisture conditions, it takes from 1 to 3 years for stands to become fully established. This species is drought tolerant once established.

Method of Selection: In 1961, several accessions of species were obtained from the State University in Raleigh, North Carolina and planted in plots at the PMC, which was then located at Arcadia, Florida. Over the next 5 years, the peanut plots were fertilized and maintained. In 1966, all accessions were evaluated for rapidity of spread and canopy closure. Some accessions were also tested for forage quality and production. The 10 highest rated accessions were selected, and moved to 3' x 4' holding blocks at Brooksville, Florida in 1967, the new location of the PMC. The PI numbers of the 8 accessions in this collection were 262794, 262797, 262801, 262817,

262828, 262832, 262834, and 262840 (these accessions are still maintained at the Southern Regional Plant Introduction Station in Griffin, GA). Out of these accessions, the forage variety 'Arbrook' (262817) was selected and released.

Other peanut accessions that did not rate among the top 10 were brought from Arcadia and planted on the eastern end of the rod row blocks at the Brooksville PMC in 1967. These included 2 accessions originally obtained from the Coastal Plains Experiment Station in Tifton, GA, with Plant Introduction numbers 421706 and 421709. In 1969, these 2 accessions were moved from the rod row blocks to the holding blocks containing the top 10 accessions. Griffin, GA does not maintain this material or have any information on its origin. No material of these accessions is presently known to exist, so possible contribution to the parentage of Brooksville 68 Germplasm cannot be verified.

An additional accession, PI 262287, was moved from Arcadia and planted in the western-most rod row block at the Brooksville PMC in 1967. In 1971, material from this accession was transplanted to the holding blocks, bringing the total number of species in this area to 13.

The holding block area was maintained until approximately 1974, and then abandoned and the peanuts were allowed to intermingle with each other. In 1991, Brooksville 68 Germplasm rhizomes were collected from an area immediately adjacent to the holding blocks and placed in an isolated block and given the NRCS accession number 9056068. Brooksville 68 Germplasm was easily distinguishable because of its low growth habit, unusual leaf shape and a multitude of yellow blooms. Of the surviving accessions grown in the holding blocks, Brooksville 68 Germplasm most resembles PI262287 (see attached photos). Further evidence for this supposition is that in 1991, material matching Brooksville 68 Germplasm's description was also seen growing near the original rod row location of PI262287. The USDA ARS Germplasm Resources Information Network lists PI262287 as being originally collected in Brazil (Rhondonopolis, 176km north of Gaucho, road to Cuiaba) by W. Gregory of North Carolina State University. Vegetative material is still maintained by the Plant Introduction Station at Griffin, GA.

Between 1991 and 2001, Brooksville 68 Germplasm was evaluated for adaptation at a variety of sites throughout Florida. See the attached description for full details.

Ecological Considerations and Evaluation: 'Floragraze', a forage variety of , has been planted widely throughout Florida, especially in pastures and citrus groves. To date, there have been no reports of this or any other type of perennial peanut invading adjacent native sites. Brooksville 68 Germplasm spreads much less aggressively than Floragraze, and is therefore expected to be even less likely to invade native sites. Perennial peanut does not survive in heavily wooded areas, areas with high water tables, or in highly droughty, sandy areas. It spreads only through rhizome growth or the translocation of rhizome material. To establish, conditions must be moist and favorable for rhizome material to survive without supplemental irrigation. Perennial peanuts are extremely slow to establish, and will grow in conjunction with other species,

especially grasses. They can be destroyed fairly easily using repeated applications of broadleaf herbicides such as dicamba.
Although they are not known to be invasive, perennial peanuts could potentially move into adjacent areas if conditions are favorable. Along roadways, it is recommended that they only be planted in areas surrounded by physical barriers, such as median strips. When planted in pastures or groves, they should not be planted adjacent to native areas that might favor the growth of perennial peanuts. In urban areas, they will spread into adjacent vegetated areas unless they are contained with physical barriers (see associated environmental impact assessment).

Anticipated Conservation Use: Brooksville 68 Germplasm was selected for use as a low-growing, low-maintenance ground cover and turf. In groves, perennial peanut reduces the amount of mechanical tillage and mowing necessary to control weeds in alleyways, and provides a sustainable source of nitrogen. Along roadways and in urban areas, it provides a low-maintenance, drought tolerant, disease resistant ground cover. Grass species growing within perennial peanut stands appear noticeably greener from the nitrogen produced by the peanuts. Brooksville 68 Germplasm is recommended for use as a turf, because it's low growth habit responds well to repeated low mowing.

Anticipated Area of Adaptation: Brooksville 68 Germplasm prefers moist, moderate to well-drained sandy or loamy soils in full sun or partial shade. In Florida adaptation studies, it survived in locations within USDA Plant Hardiness Zones 8b and 9 if adequate moisture was available. Although not yet tested, it may also be adapted to sites in other states within these zones.

Availability of Plant Materials: Rhizomes will be maintained at the USDA NRCS Plant Materials Center in Brooksville, Florida, and are available in limited quantities to interested parties for increase purposes.

Prepared by:
C. Maura, Jr. and S. Pfaff, USDA NRCS Plant Materials Center, 14119 Broad Street, Brooksville, FL 34601.

Signatures for release of:

Brooksville 68 Germplasm Perennial Peanut (*Arachis glabrata*)

T. Niles Glasgow
State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Gainesville, Florida

Date

Dr. Richard Jones
Dean for Research Programs
Florida Agricultural Experiment Station
Gainesville, Florida

Date

Diane E. Gelburd
Director Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Date